GE Electronic TUBE — KEN-RAD

12SR7

Description and Rating

DUPLEX-DIODE TRIODE

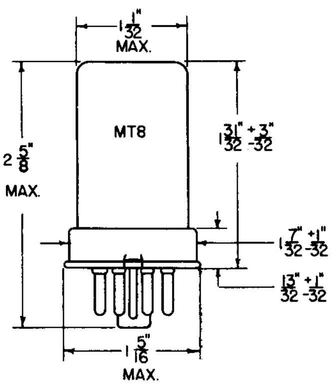
GENERAL DESCRIPTION

Principal Application: The type 12SR7 is a duplex-diode medium-mu triode amplifier designed for use as a combined detector, audio amplifier, and automatic-volume-control tube.

Cathode:	Coated Unipotential
Heater Voltage (A-C or D-C)	12.6 Volts
Heater Current	0.15 Ampere
Envelope:	MT-8 Metal Shell
Base:	B8-21 Small Wafer Octal 8-Pin Phenolic

Mounting Position:	Any
Direct Interelectrode Capacitances: *	
Input	2.4 μμf
Output	3.6 μμf
Plate to Cathode	2.8 μμf

PHYSICAL DIMENSIONS

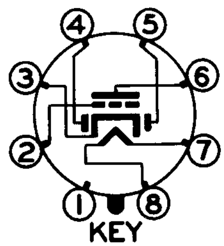


RMA 8-1

TERMINAL CONNECTIONS

Pin 1 - Shell
Pin 2 - Triode Grid
Pin 3 - Cathode and Internal Shield
Pin 4 - Diode Plate Number 2
Pin 5 - Diode Plate Number 1
Pin 6 - Triode Plate
Pin 7 - Heater
Pin 8 - Heater

BASING DIAGRAM



RMA 8Q
BOTTOM VIEW

MAXIMUM RATINGS

	Design Center	Absolute	
Plate Voltage	250	275	Volts
Plate Dissipation	2.50	2.75	Watts
Diode Operation Current per Plate	0.9	1.0	Milliampere
D-C Heater-Cathode Voltage	90	100	Volts

CHARACTERISTICS AND TYPICAL OPERATION

CLASS A AMPLIFIER

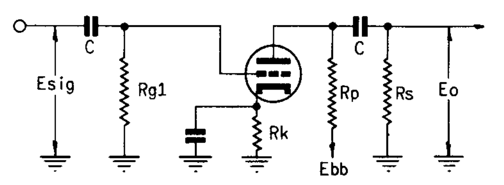
Heater Voltage	12.6	Volts
Plate Voltage	250	Volts
Grid Bias Voltage **	-9	Volts
Amplification Factor	16	
Plate Resistance	8500	Ohms
Transconductance	1900	Micromhos
Plate Current	9.5	Milliamperes
Load Resistance	10000	Ohms
Power Output	300	Milliwatts

* *Approximate values with shell connected to cathode and internal shield.*

** *The d-c resistance in the grid circuit should not exceed 1.0 megohm under rated maximum conditions.*

CLASS A RESISTANCE-COUPLED AMPLIFIER

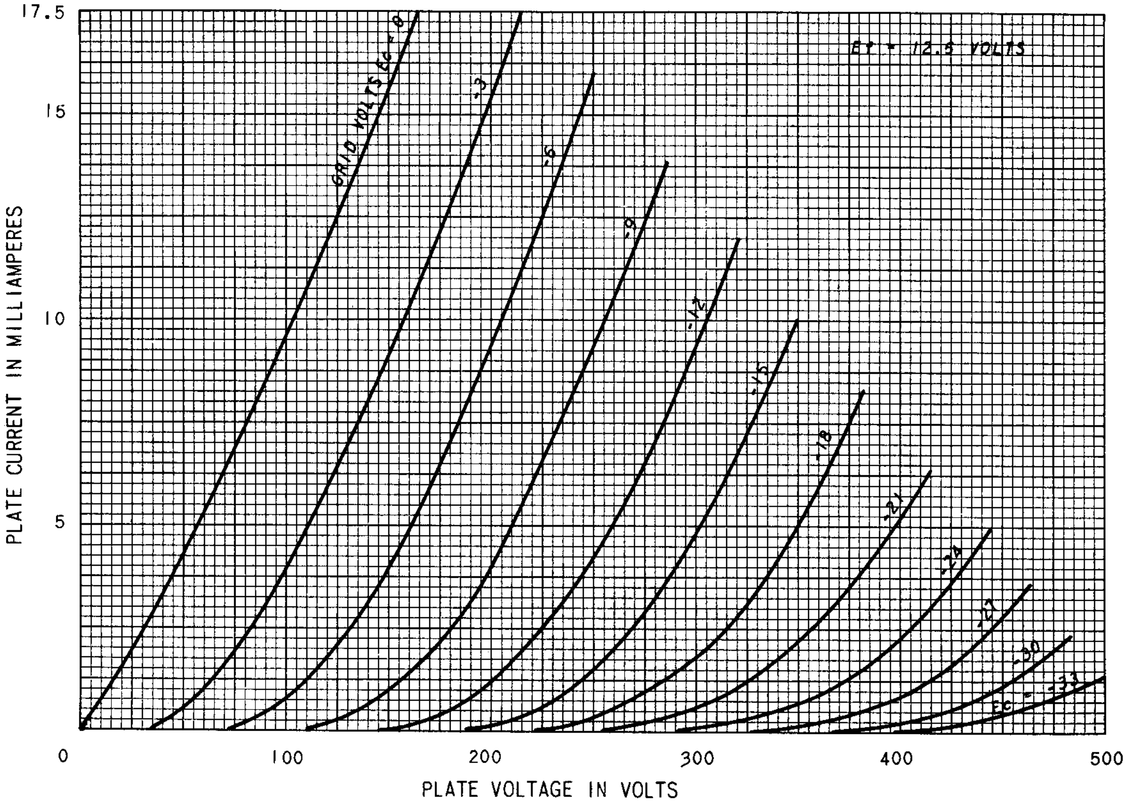
Rp Meg.	Rg1 Meg.	Rs Meg.	Ebb = 90 Volts			Ebb = 180 Volts			Ebb = 300 Volts		
			Rk	Gain	Eo	Rk	Gain	Eo	Rk	Gain	Eo
0.10	*	0.10	3300	10	15	3000	10	32	2700	10	46
0.10	*	0.24	4300	11	19	3900	11	39	3300	11	55
0.24	*	0.24	7500	11	17	6200	11	32	5600	11	49
0.24	*	0.51	8200	11	20	7500	11	36	6800	11	53
0.51	*	0.51	11000	11	17	10000	11	29	9100	11	40
0.51	*	1.0	13000	11	20	11000	11	31	10000	11	44
0.24	10	0.24	---	12	7.8	---	13	16	---	13	27
0.24	10	0.51	---	12	10	---	13	21	---	13	34
0.51	10	0.51	---	13	7.6	---	14	15	---	14	24
0.51	10	1.0	---	13	11	---	14	20	---	15	28



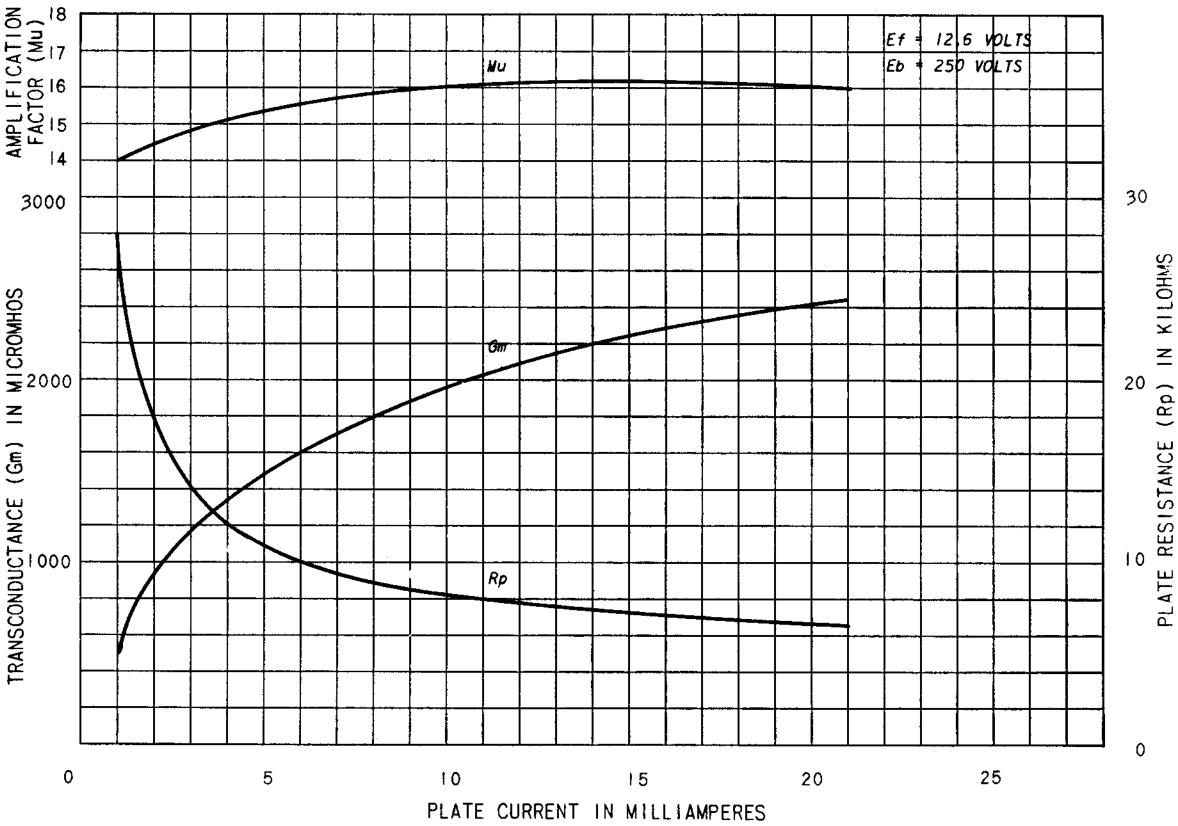
Note: Coupling capacitors (C) should be selected to give desired frequency response. Rk should be adequately by-passed.

Notes: 1. Eo is maximum RMS voltage output for five percent (5%) total harmonic distortion. 2. Gain measured at 2.0 volts RMS output. 3. For zero-bias data generator impedence is negligible. *Value of Rg1 is non-critical.

AVERAGE PLATE CHARACTERISTICS



AVERAGE CHARACTERISTICS



Electronics Department

GENERAL ELECTRIC

Schenectady, N. Y.

ET-T392

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